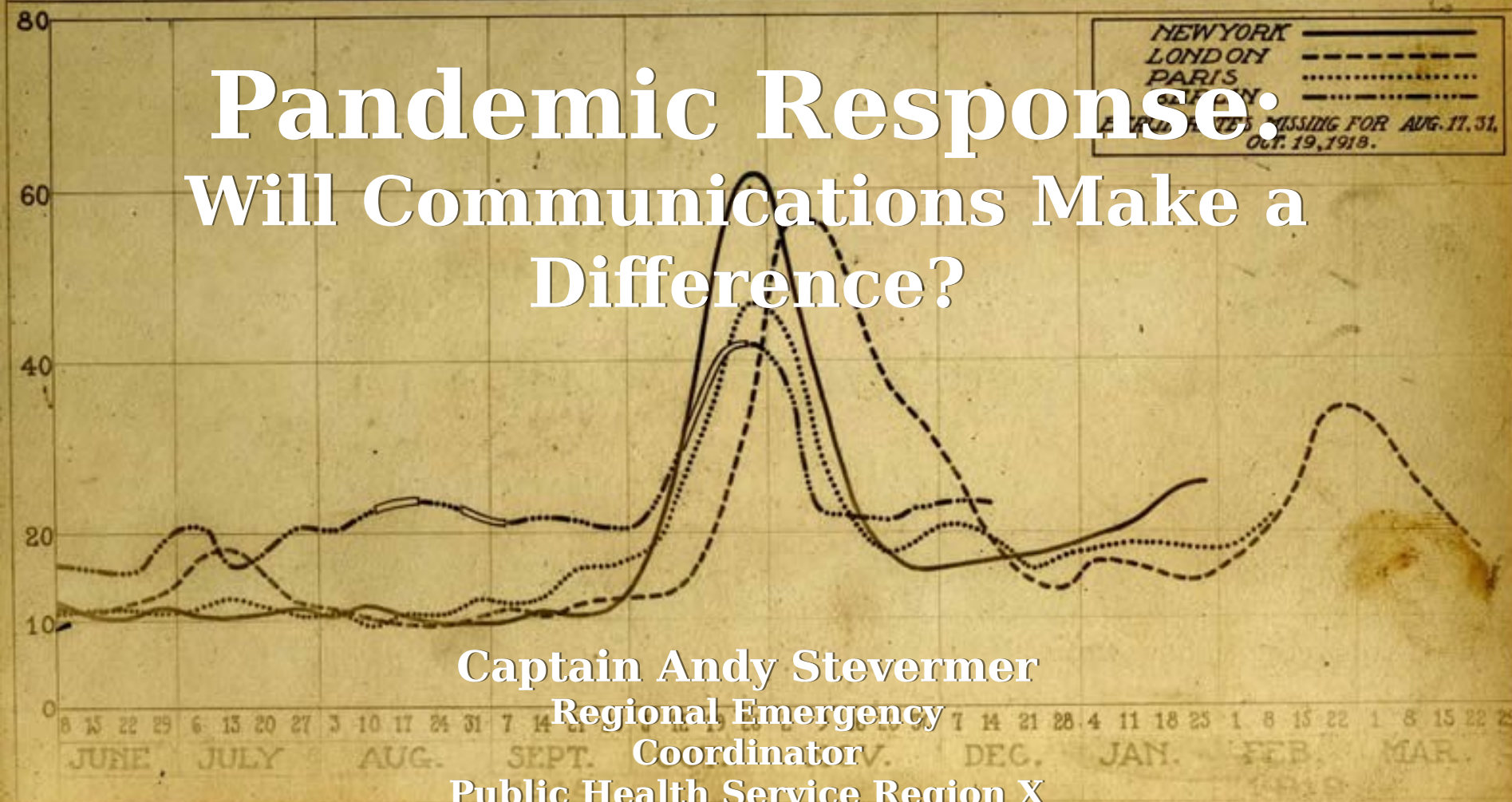


INFLUENZA PANDEMIC

MORTALITY IN AMERICA AND EUROPE DURING 1918 AND 1919

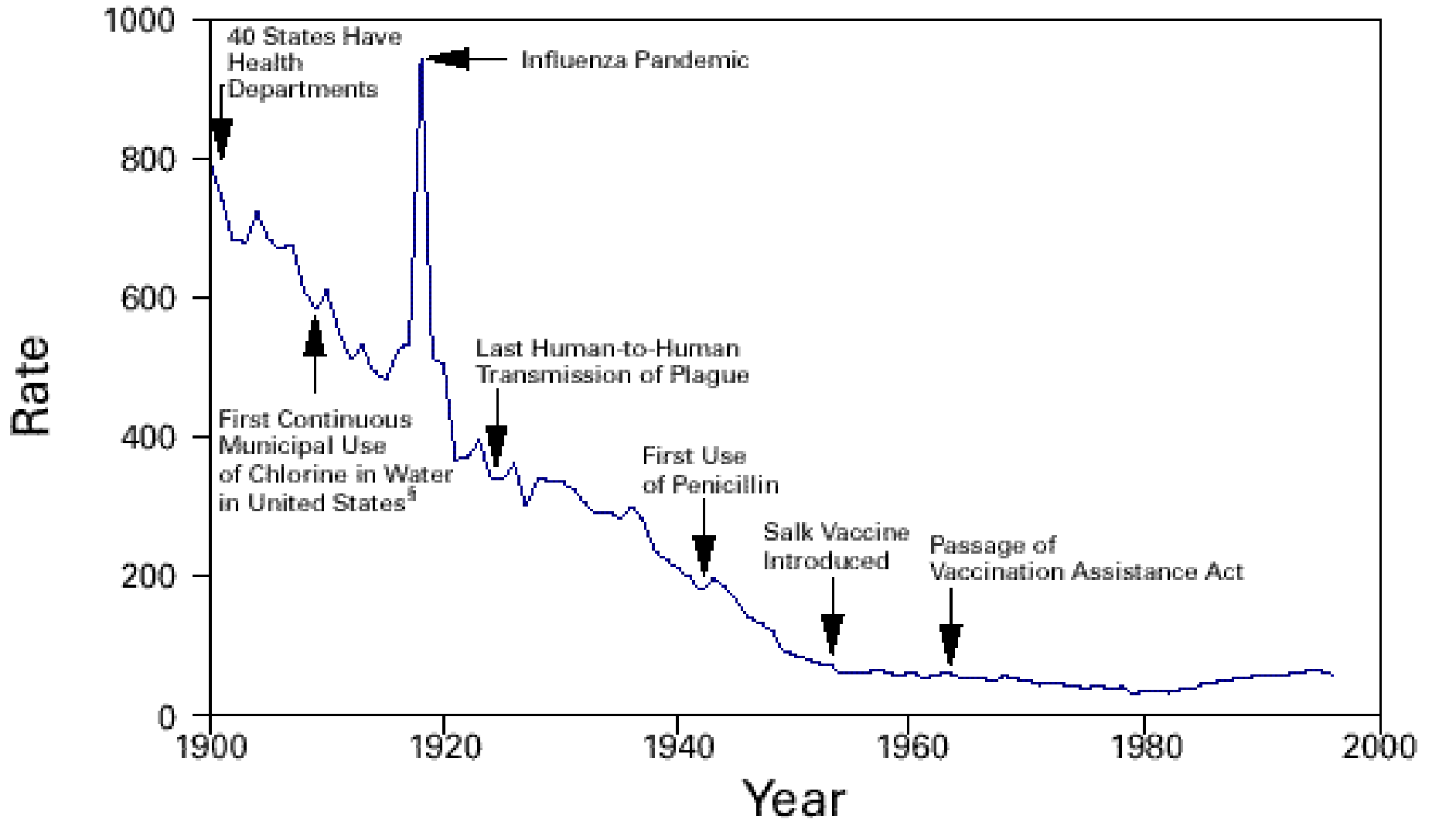
DEATHS FROM ALL CAUSES EACH WEEK
EXPRESSED AS AN ANNUAL RATE PER 1000



Objectives

- Discuss the challenges of an infectious disease emergency such as Pandemic Influenza.
- Explore the communication challenges that may result from such an emergency.
- Examine ways for communication specialists to assist in an infectious disease emergency.

FIGURE 1. Crude death rate* for infectious diseases — United States, 1900–1996†



*Per 100,000 population per year.

†Adapted from Armstrong GL, Conn LA, Pinner RW. Trends in infectious disease mortality in the United States during the 20th century. JAMA 1999;281:61–6.

§American Water Works Association. Water chlorination principles and practices: AWWA manual M20. Denver, Colorado: American Water Works Association, 1973.

**Leading causes of death worldwide (estimates for 2002).
Nearly 15 million (>25%) of the 57 million annual deaths
worldwide are caused by infectious disease**

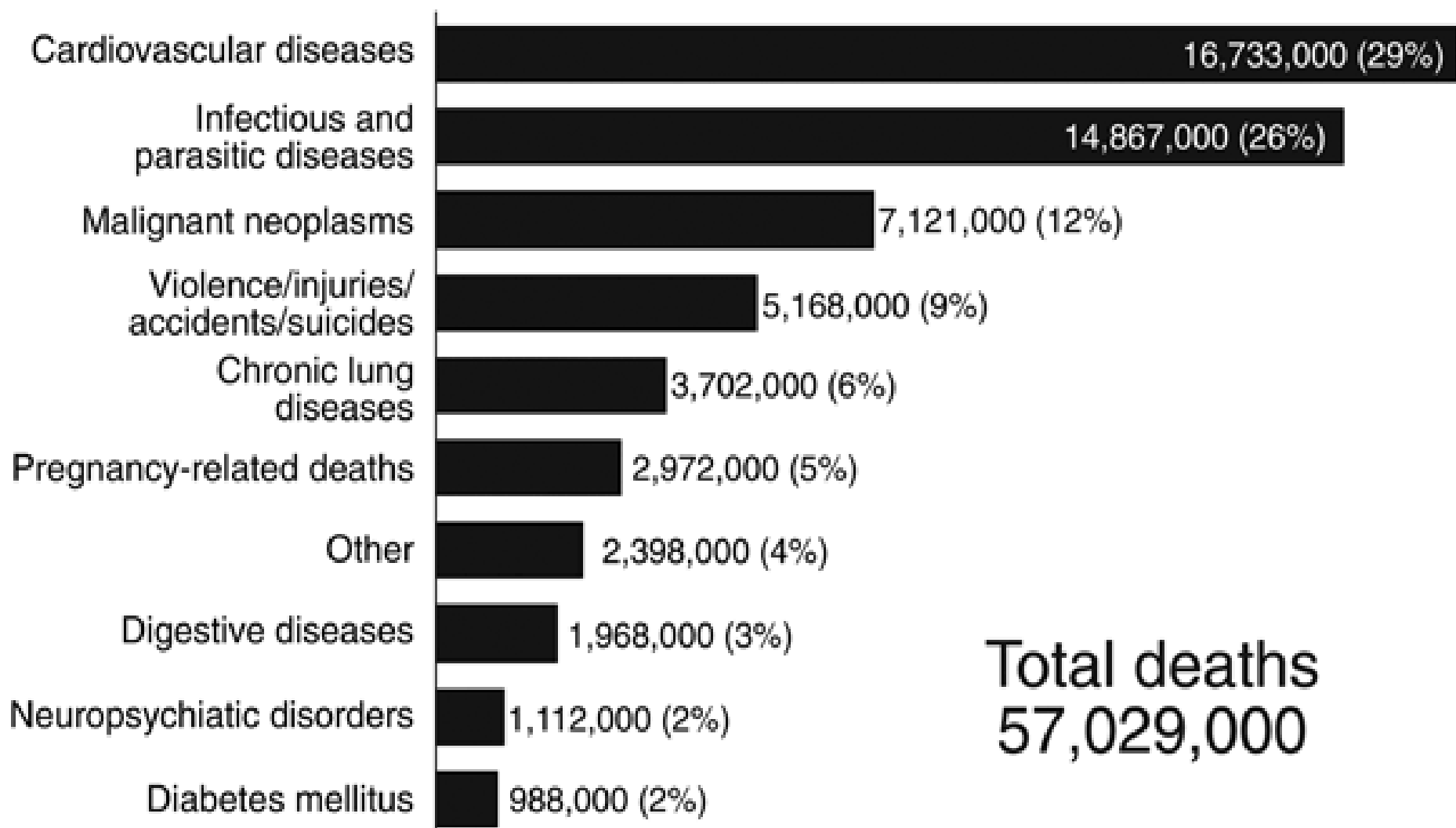
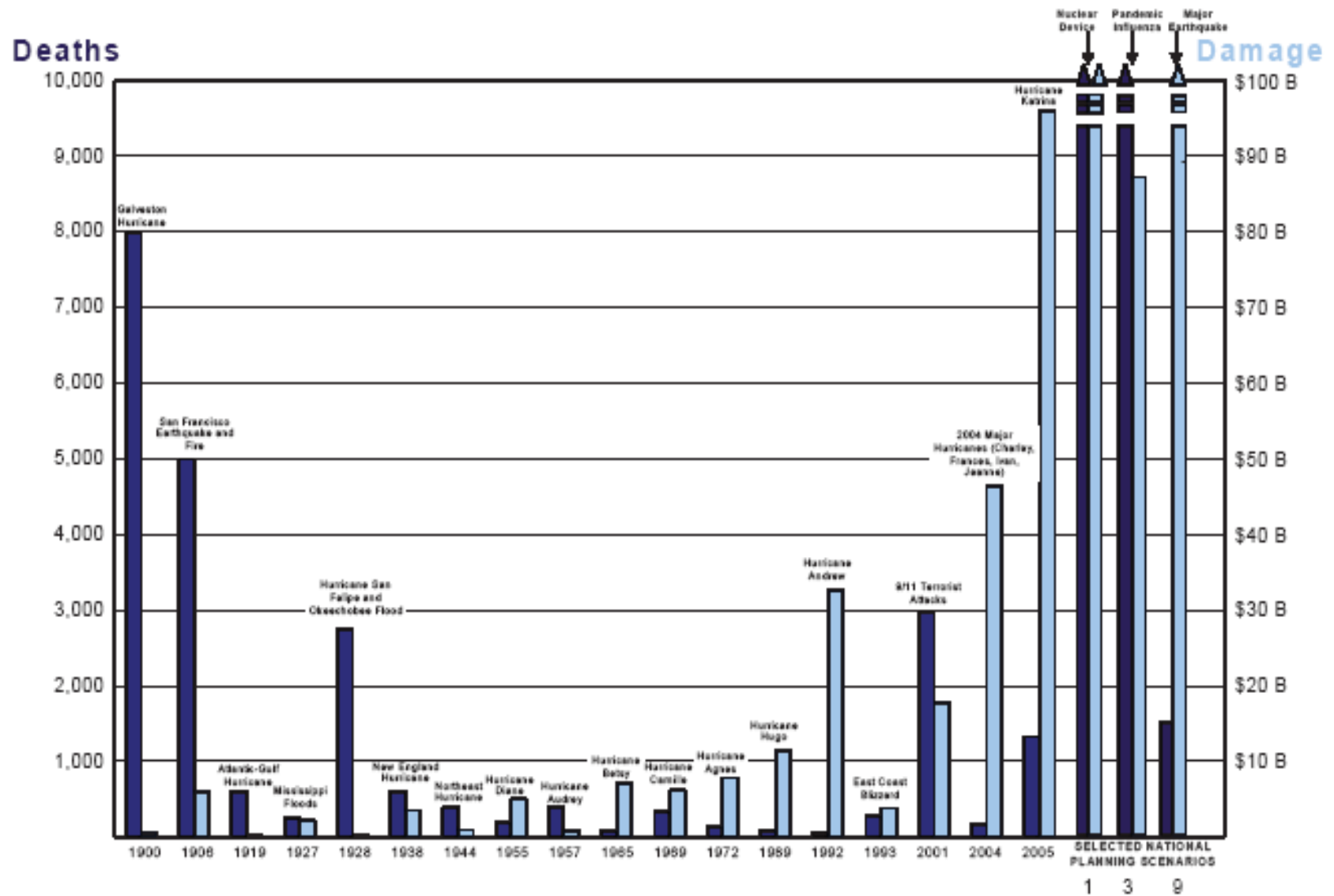
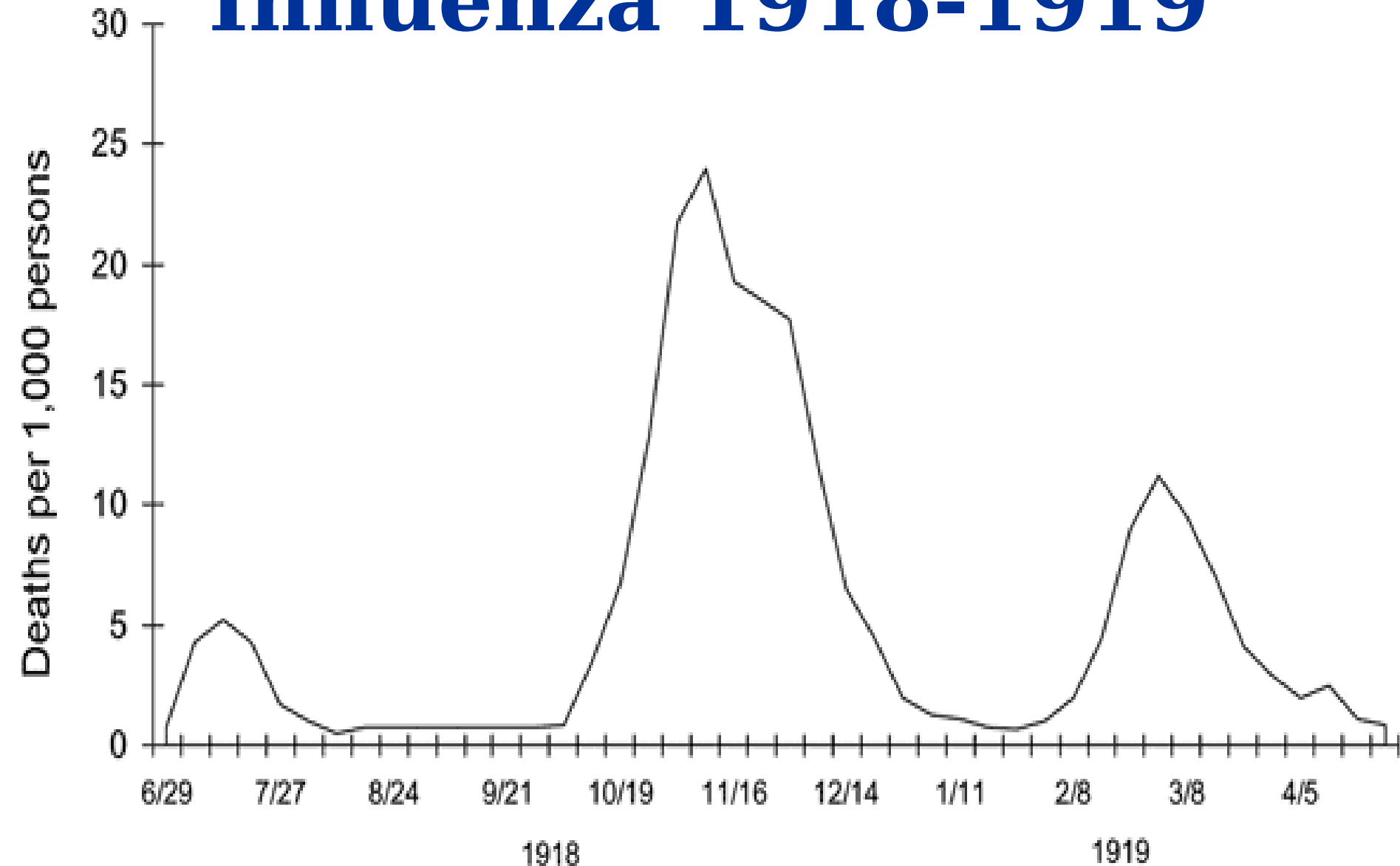


Figure 6.2. U.S. Natural Disasters that Caused the Most Death and Damage to Property in Each Decade, 1900-2005, with 2004 Major Hurricanes, September 11th Terrorist Attacks, and Selected National Planning Scenarios³¹
Damage in Third Quarter 2005 dollars



Pandemic Waves of Spanish Influenza 1918-1919



SARS

- November 2002 to June 2003 outbreak
 - 8098 cases
 - 774 deaths
 - 29 countries





300 Sick

5 Dead

**WHO Alert on
2/26/03**

**Nov 2002
to 2/20/03**

United States Department of
Health & Human Services

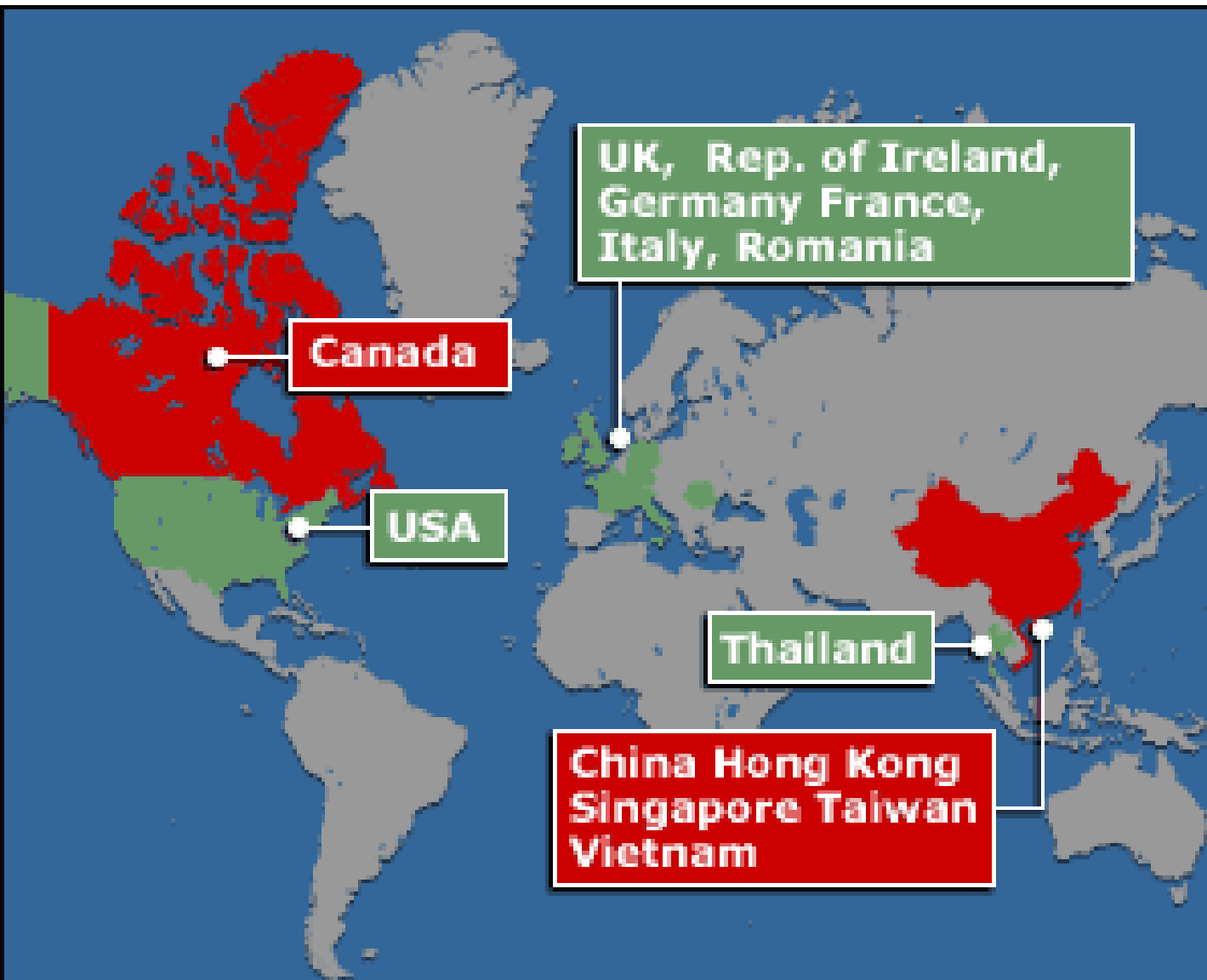
Working America to Better Health, Safety and Well-Being



**Vietnam - 20
cases**

**Hong Kong - 50
cases**

3/15/03



KEY

Hot spot

Isolated cases

**11 new
countries
impacted**

**Hong Kong -
123 cases**

9 countries

3/19/03

United States Department of
Health & Human Services

Making America to Better Health, Safety and Well-Being



1700 total
cases

62 total Deaths

Hong Kong -
200 cases

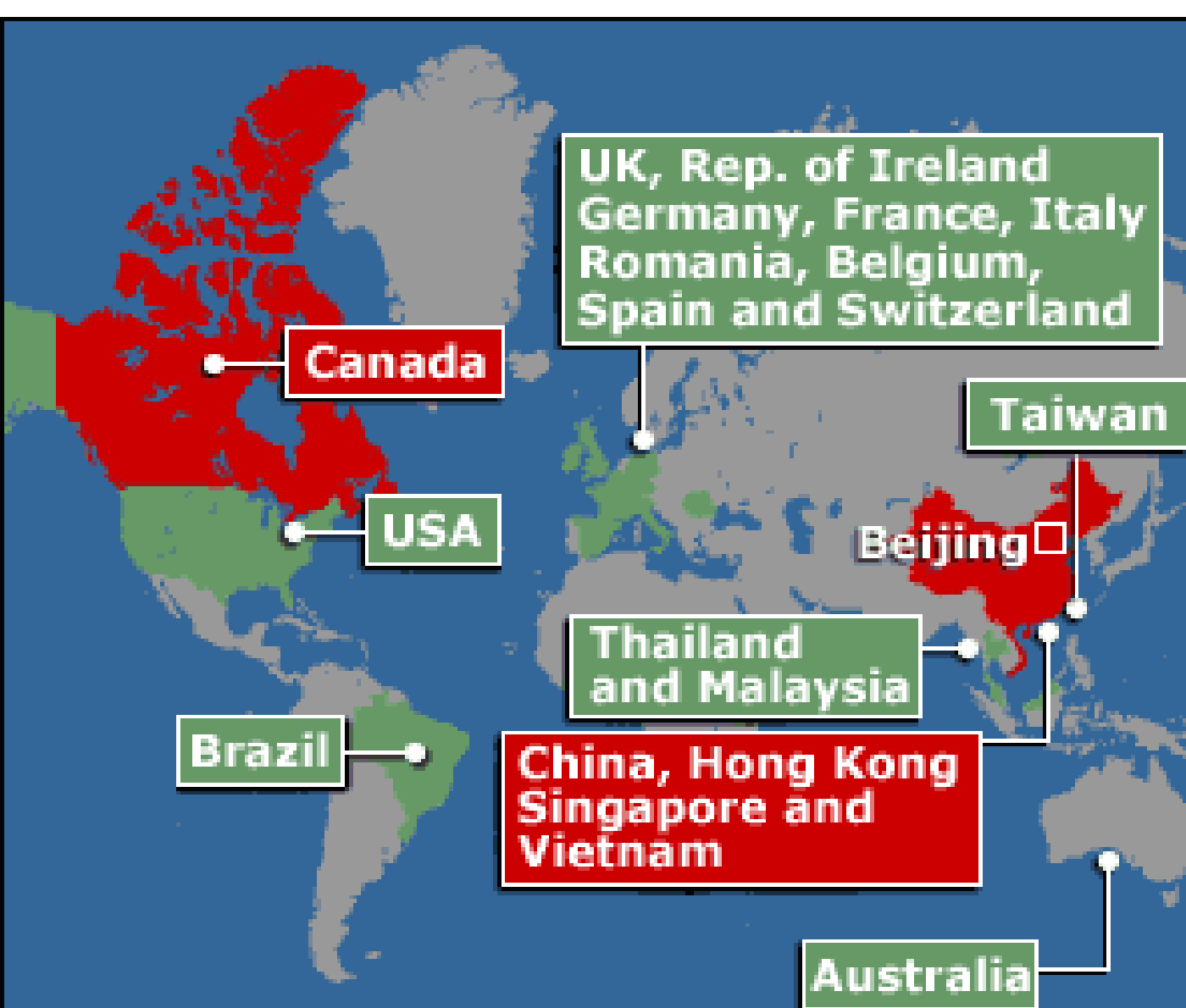
China 34 deaths

16 countries

4/1/03

United States Department of
Health & Human Services

Making America to Better Health, Safety and Well-Being



2700 total cases

106 total deaths

**Hong Kong -
970 cases and
27 deaths**

20 countries

4/10/03

KEY

- Hot spot
- Isolated cases

Rep. of Ireland, Sweden
Germany, France, Italy
Romania, Belgium, UK
Spain and Switzerland

China, Hong Kong
Singapore and
Vietnam

Canada

Taiwan,
Japan

USA

Beijing

India

Brazil

South
Africa

Phillipines,
Indonesia

Thailand
and Malaysia

KEY

Hot spot

Isolated cases

3000 total
cases

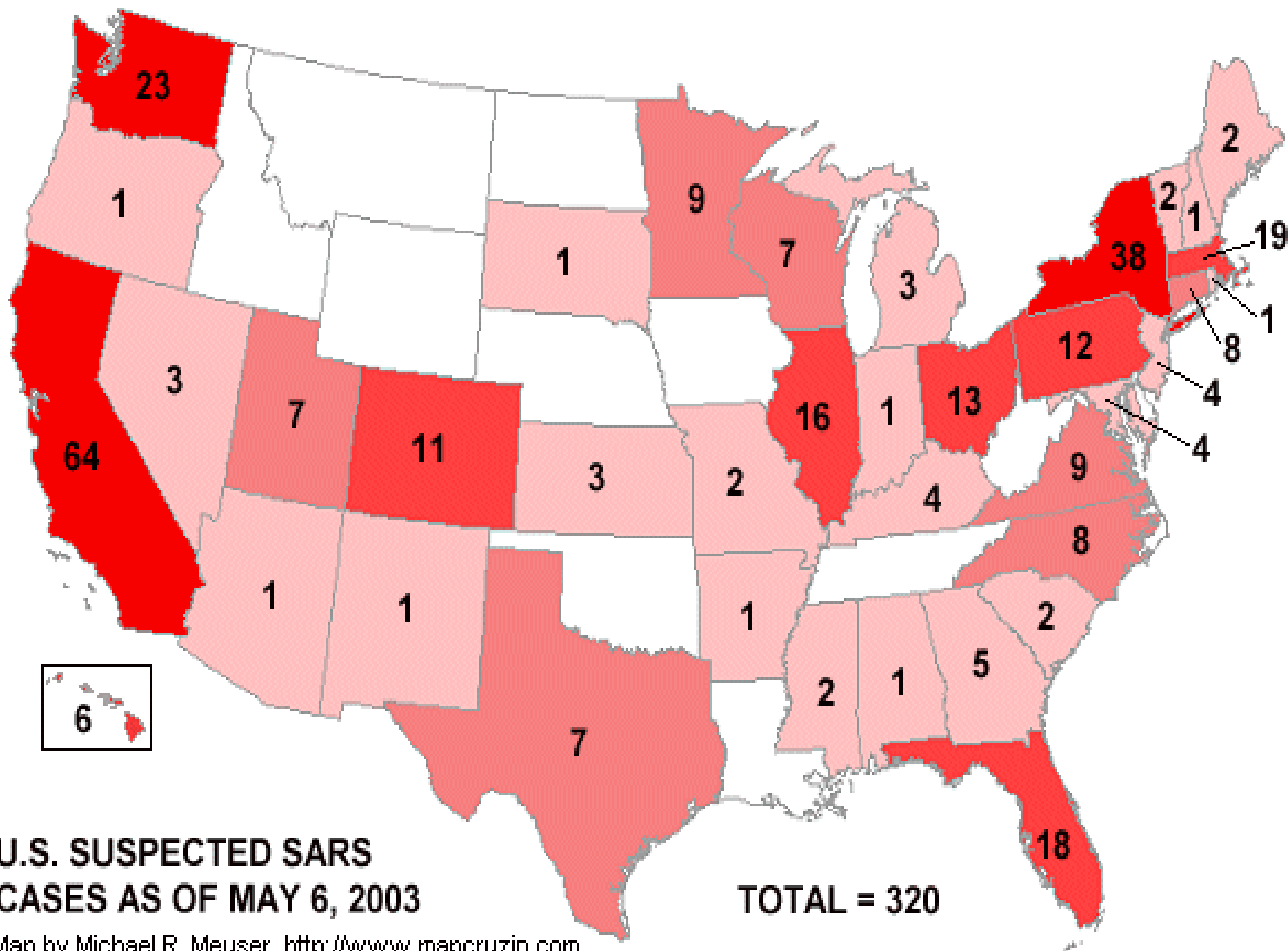
150 total
deaths

26 countries

4/21/03

United States Department of
Health & Human Services

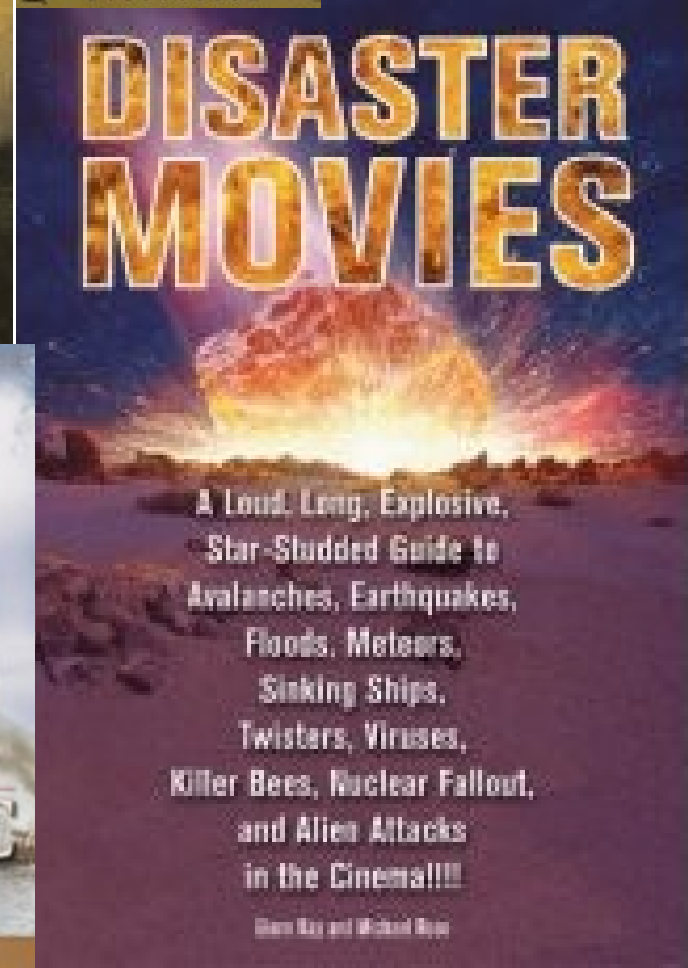
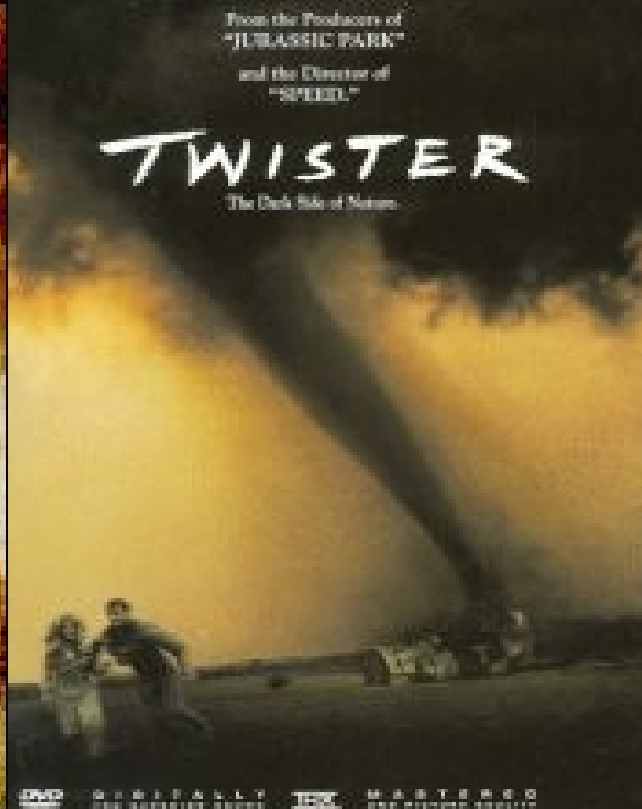
America to Better Health, Safety and Well-Being



**U.S. SUSPECTED SARS
CASES AS OF MAY 6, 2003**

TOTAL = 320

Map by Michael R. Meuser, <http://www.mapcruzin.com>



SCI FI CHANNEL PRESENTS

COUNTDOWN TO DOOMSDAY

WITH TODAY SHOW HOST MATT LAUER

- Asteroid Impact
- Gamma Ray Bursts
- Supervolcano
- Global Pandemic
- Giant Solar Flare
- Nuclear Terrorism
- Machine Rebellion
- Alien Invasion
- Global Warming
- Mass Extinction

CATASTROPHE!

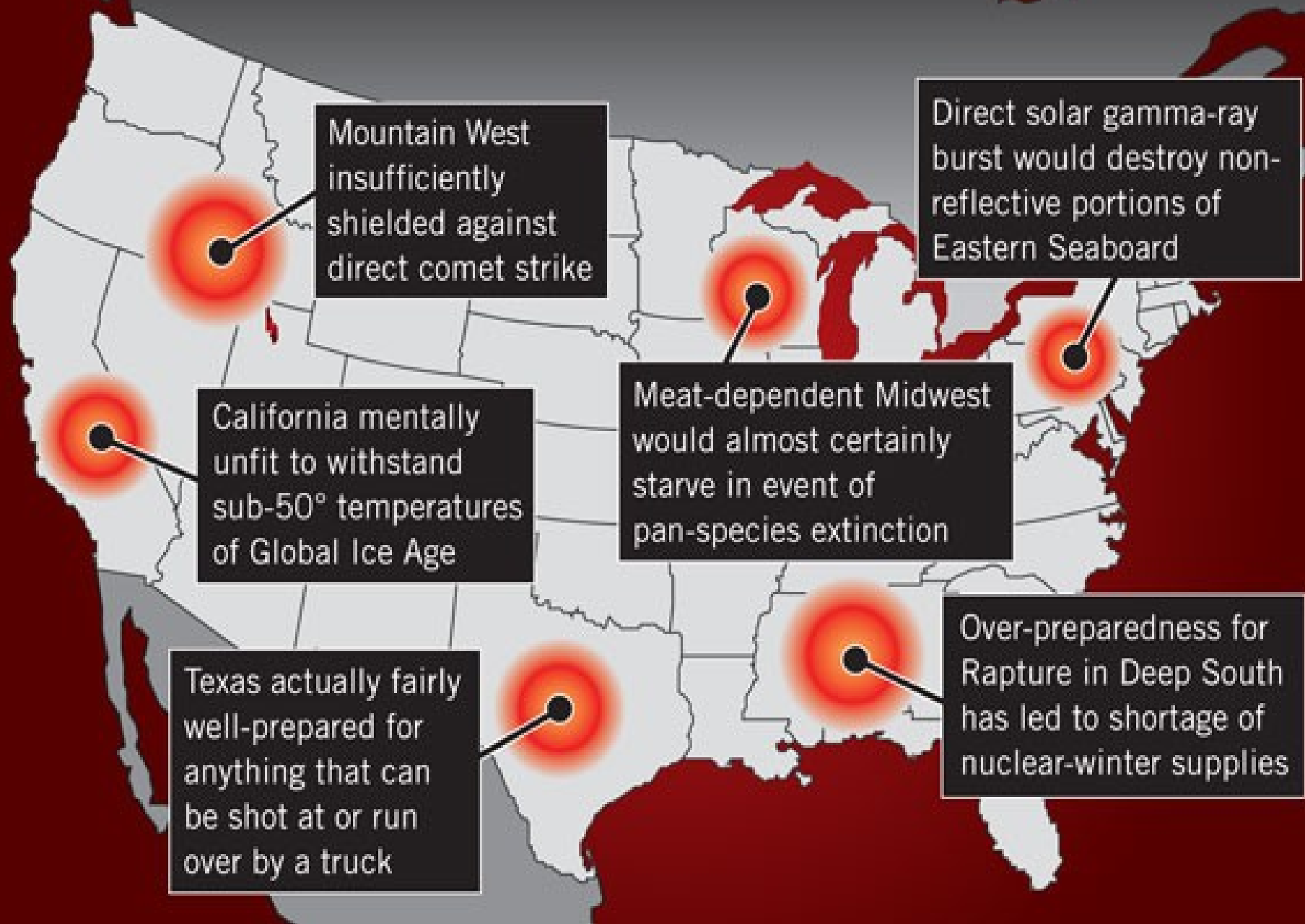


THE
100

GREATEST DISASTERS OF ALL TIME

STEPHEN J. SPIGNESI

U.S. Apocalyptic Vulnerabilities



The LAST TOWN on EARTH

A Novel

Thomas Mullen

ABC ORIGINAL MOVIE



Fatal Contact: Bird Flu in America

Tuesday, May 9 at 8/7c

Starring Joely Richardson, Stacy Keach, Ann Cusack, Justina Machado, Scott Cohen and David Ramsey

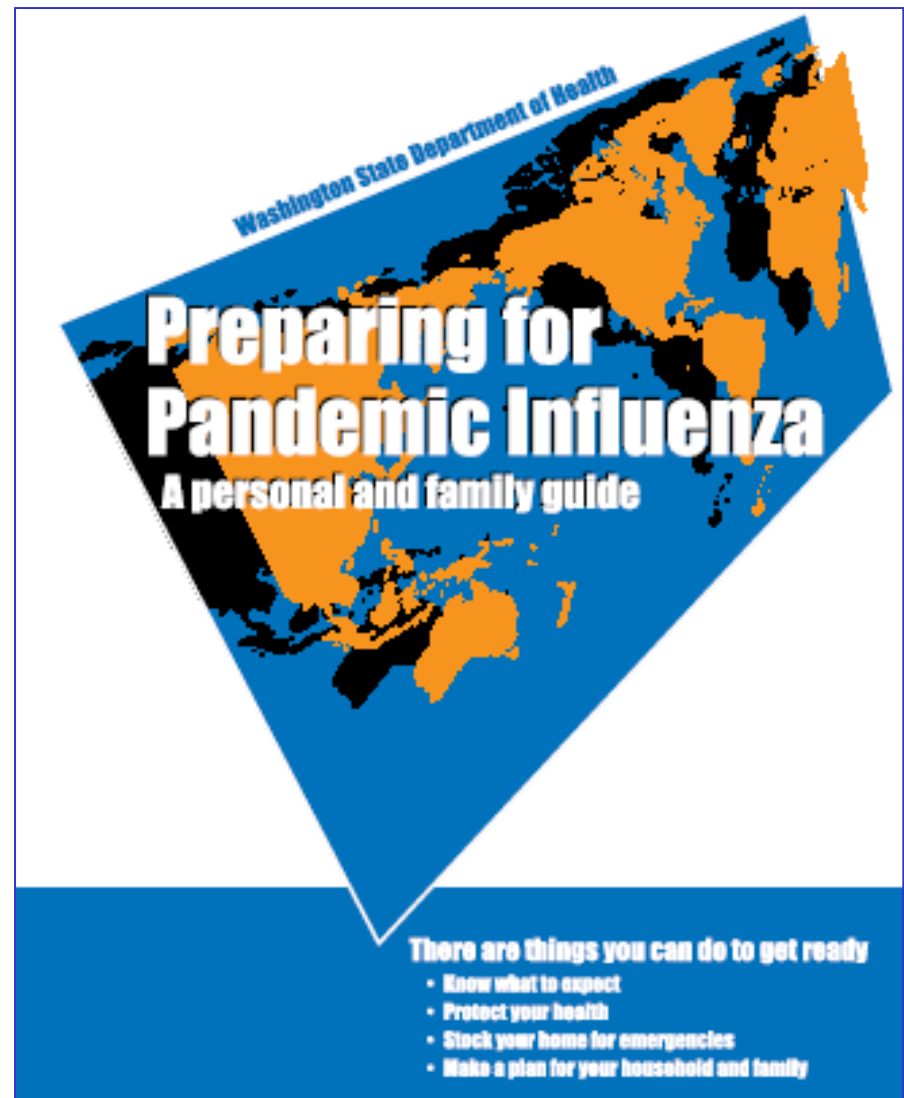
HHS Viewer Guide to 'Fatal Contact: Bird Flu in America'

Frequently Asked Questions About Bird Flu





1953

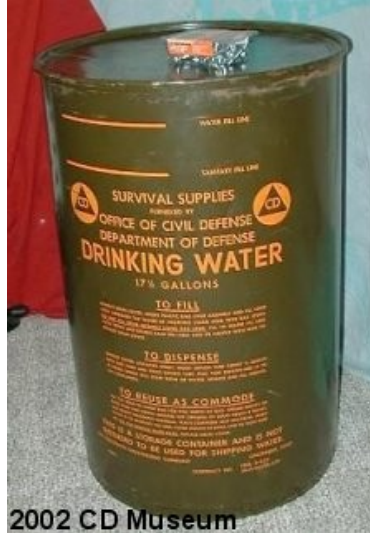


2006

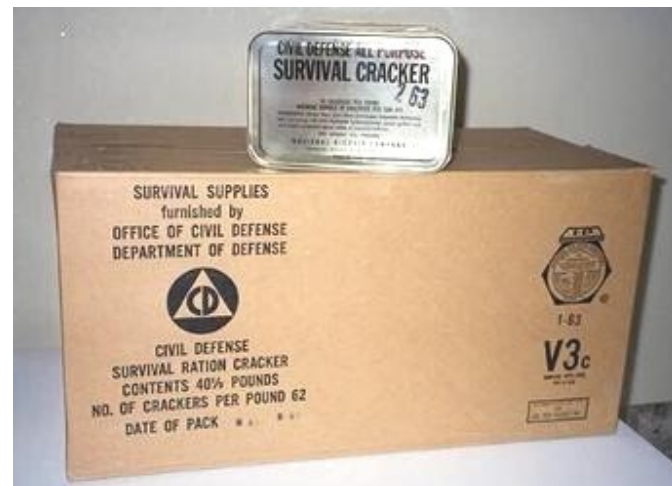




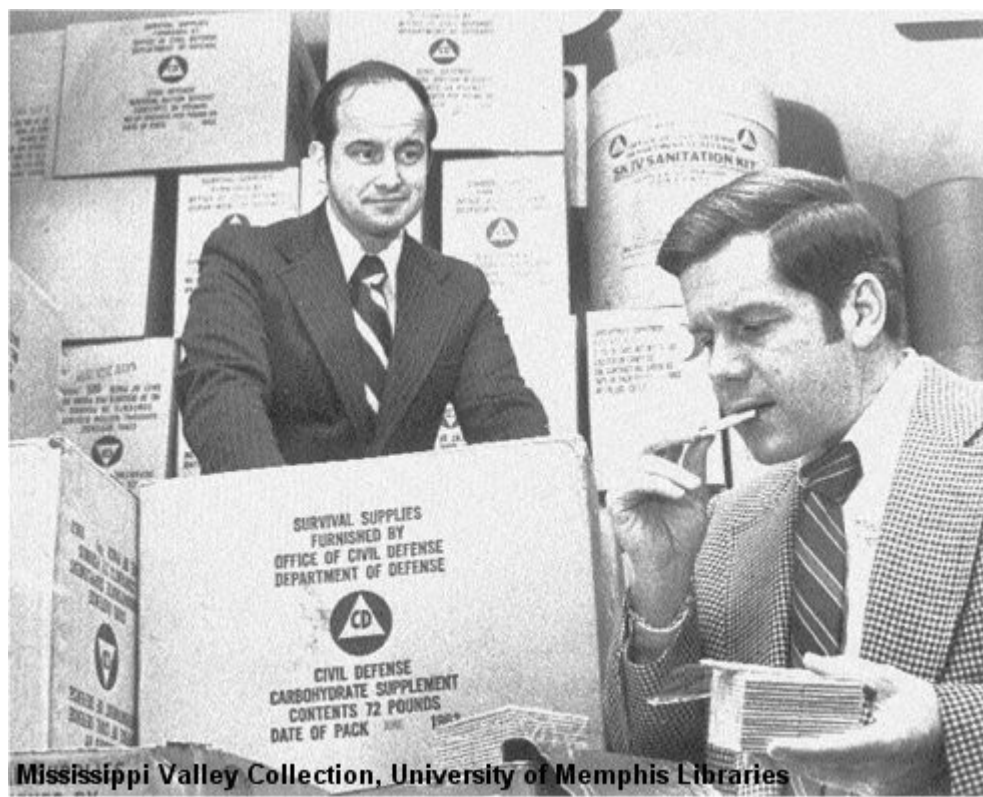
National Archives College Park MA.
Photo 35-S-1
www.civildefensemuseum.com



2002 CD Museum



National Archives College Park MA.
Photo 6-G-3
www.civildefensemuseum.com



Mississippi Valley Collection, University of Memphis Libraries

Packaged Disaster Hospitals





Operation Greenlight



The Public Message for Everyone

**Prepared
Preparanoid**





What's
all the
fuss
about?

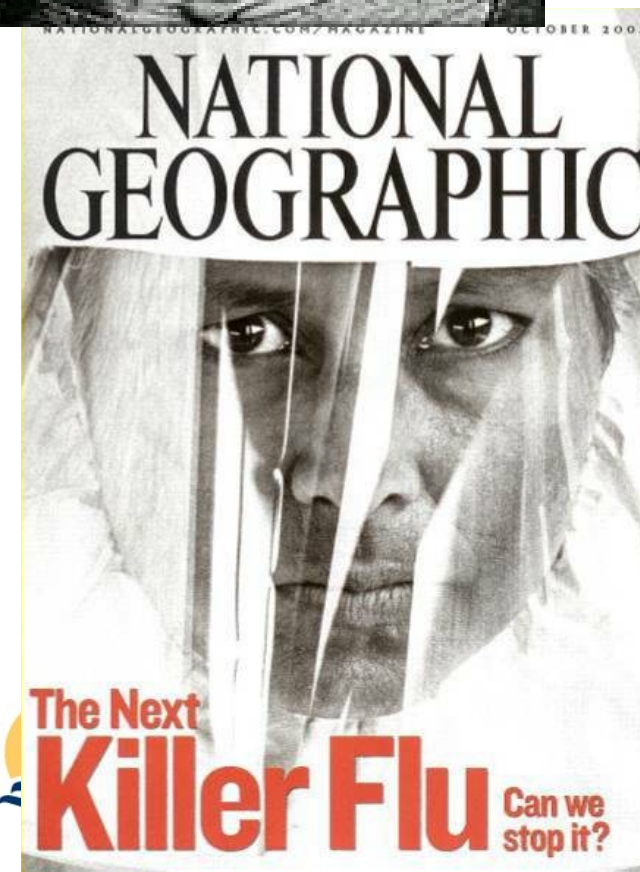
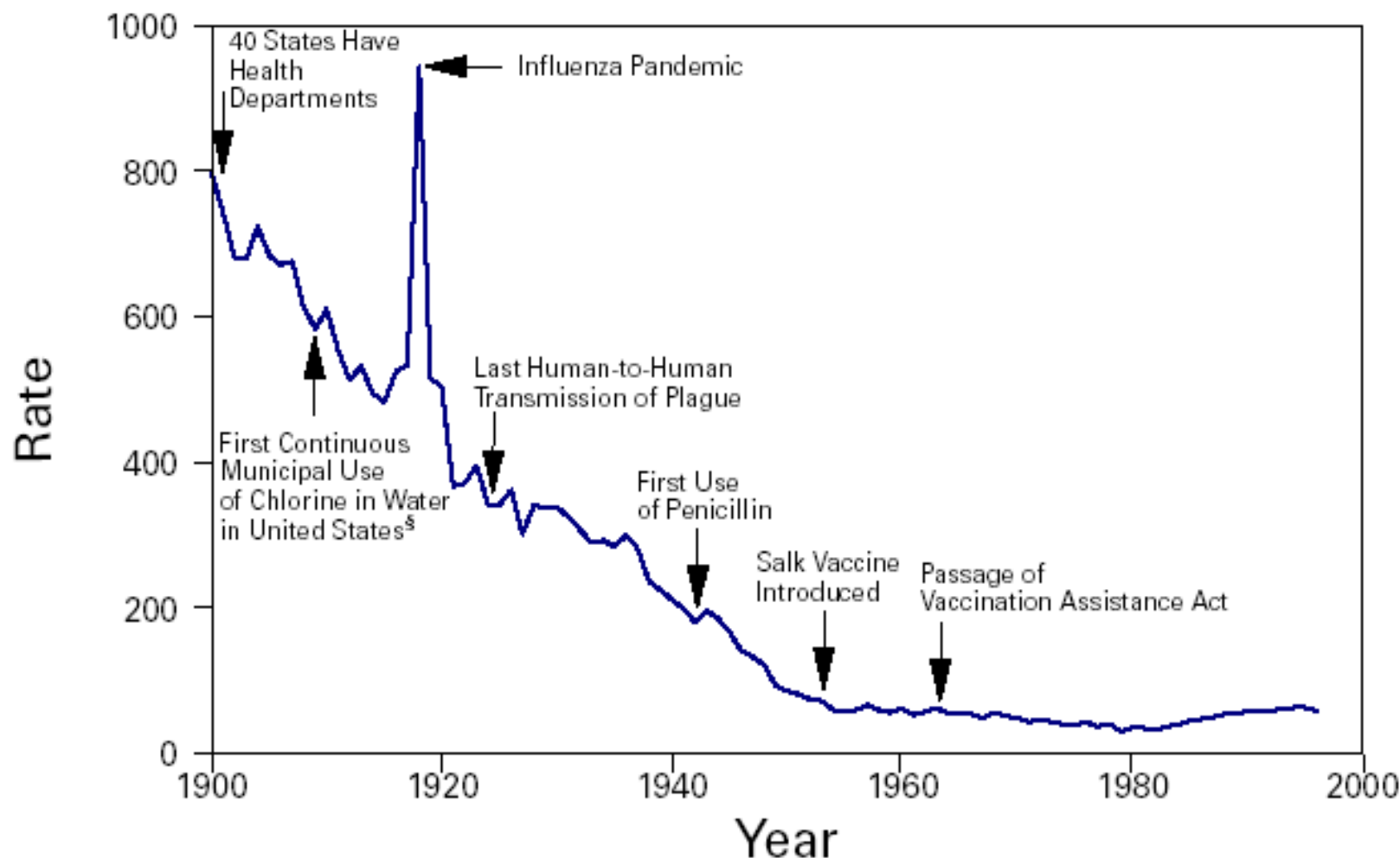


FIGURE 1. Crude death rate* for infectious diseases — United States, 1900–1996†

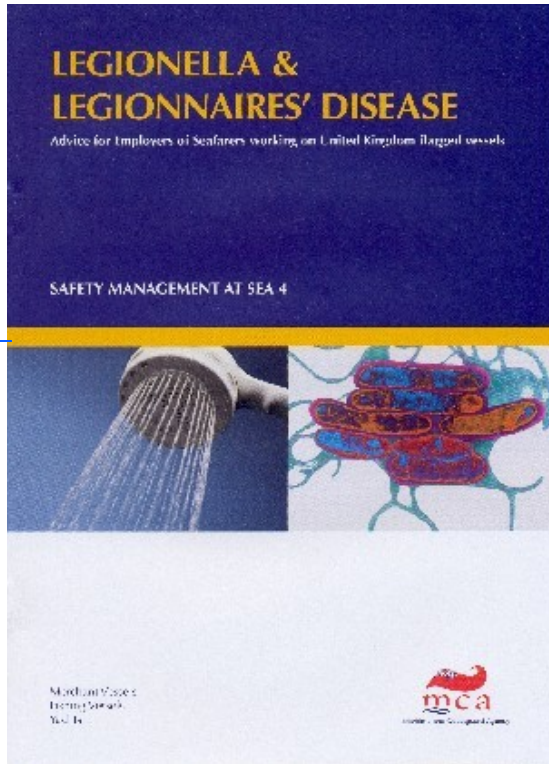


*Per 100,000 population per year.

†Adapted from Armstrong GL, Conn LA, Pinner RW. Trends in infectious disease mortality in the United States during the 20th century. JAMA 1999;281:61–6.

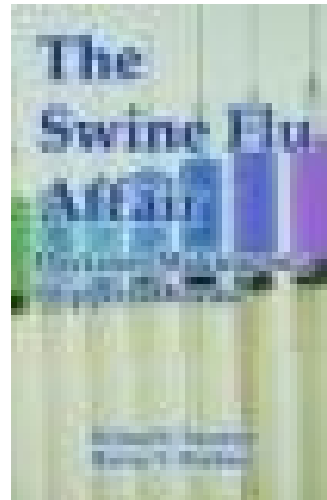
§American Water Works Association. Water chlorination principles and practices: AWWA manual M20. Denver, Colorado: American Water Works Association, 1973.

Remember these?



Legionnaires' Disease

Swine Flu



Ebola
Virus

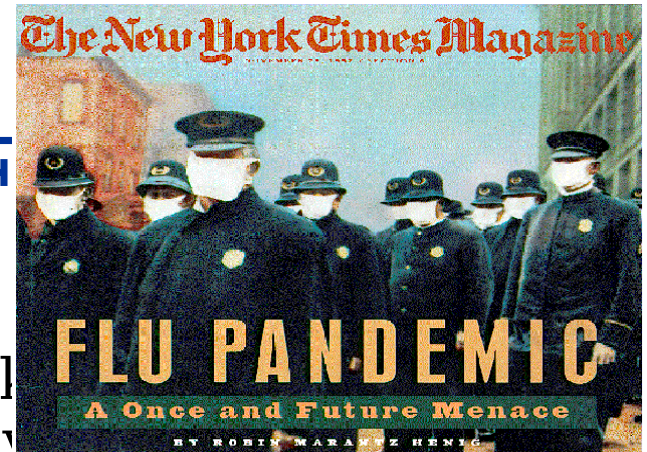


Toxic Shock
Syndrome



SARS

Influenza: Scary F



- In 1918, the so-called "Spanish flu" killed 675,000 Americans — more than have died on all battlefields in the 20th Century combined
- Estimated 40-50 million deaths worldwide from the 1918 influenza pandemic
- Influenza pandemics have occurred for hundreds of years—three in the 20th Century (1918, 1957, 1968)
- “Bird flu” (A/H5N1 strain) is now spreading rapidly among birds—and it is a relative of the Spanish flu virus
- Among persons infected by A/H5N1, high mortality rate among previously healthy children and young adults
- Most “conditions” for a pandemic have been met

Influenza: Not-So-Scary Facts



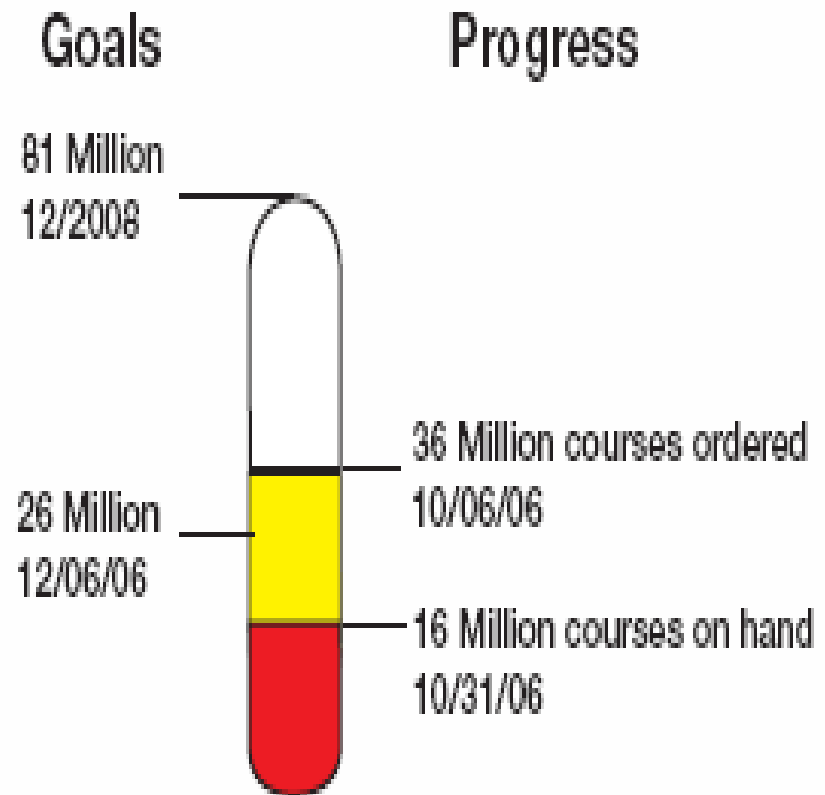
- There is currently no pandemic (avian flu-derived) human influenza
- 1918 all-infectious-disease US mortality rate of ~950/100,000 people means **>99% of Americans survived**
 - Of those infected in U.S., influenza death rate ~2.5%
- Other 20th Century pandemics much less severe than 1918 pandemic: ~50 (1918) vs. 2 (1957) vs. 1 (1968) million deaths
- PH authorities have been working hard to improve preparedness for several years now

Medical Countermeasures for Pandemic



- Medications
 - Availability
 - Effectiveness
 - Prophylaxis vs. Treatment
 - Speed of Delivery
 - New Drug Development
- Vaccine
 - Availability
 - Production Capacity
 - Dose Sparing Technology
 - New Target Antigens

Antiviral Stockpile



Disease Control Strategies

- Isolation (NOT Quarantine)
 - In hospitals?
 - Just-in-time competitive spirit
 - Alternative Care Centers
 - At home?
 - Sick People Stay Home!
 - 59 million Americans have no sick leave

Disease Control Strategies

- Large Scale Quarantine Measures
 - “Forced isolation and quarantine are ineffective and impractical.” - WHO
 - The ethical considerations of forced confinement of sick people with well.
 - Caring for confined quarantined populations puts an added burden on a stressed system.

Disease Control Strategies

- Voluntary Home Quarantine Measures
 - Sounds logical, but.....can it be executed?
 - People in congregate living arrangements such as college dorms?
 - Lack of sick leave, home support and supplies to stay at home.
 - Ethical issues of exposing healthy household members to the infection.

Disease Control Strategies

- Protective Sequestration
 - Staying at home to get away from sick people.
 - Eg. School closures, Telework
 - Will these strategies work?
 - Will people stay home?
 - Will people bring infections to uninfected people?

Disease Control Strategies

- Social Distancing
 - School Closure
 - Workforce Impact
 - Nutritional Impact
 - Prohibition on Social Gatherings
 - Travel Restrictions
 - Maintaining Personal Distance
 - Personal Protective Equipment

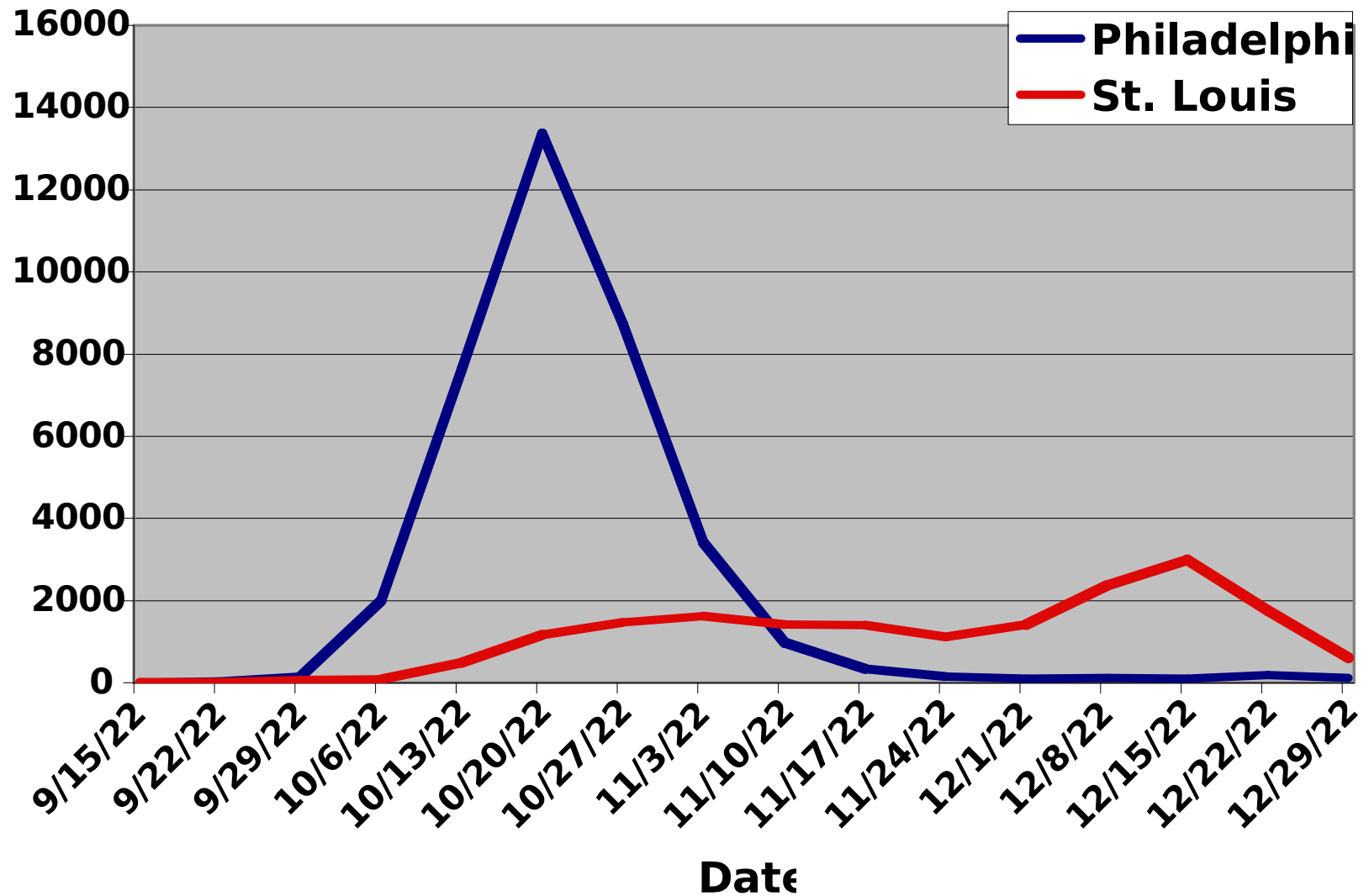
Liberty Loan Parade

September 28, 1918

Photo # NH 41730 F5L aircraft hull in Liberty Loan parade in Philadelphia, 28 Sept. 1918

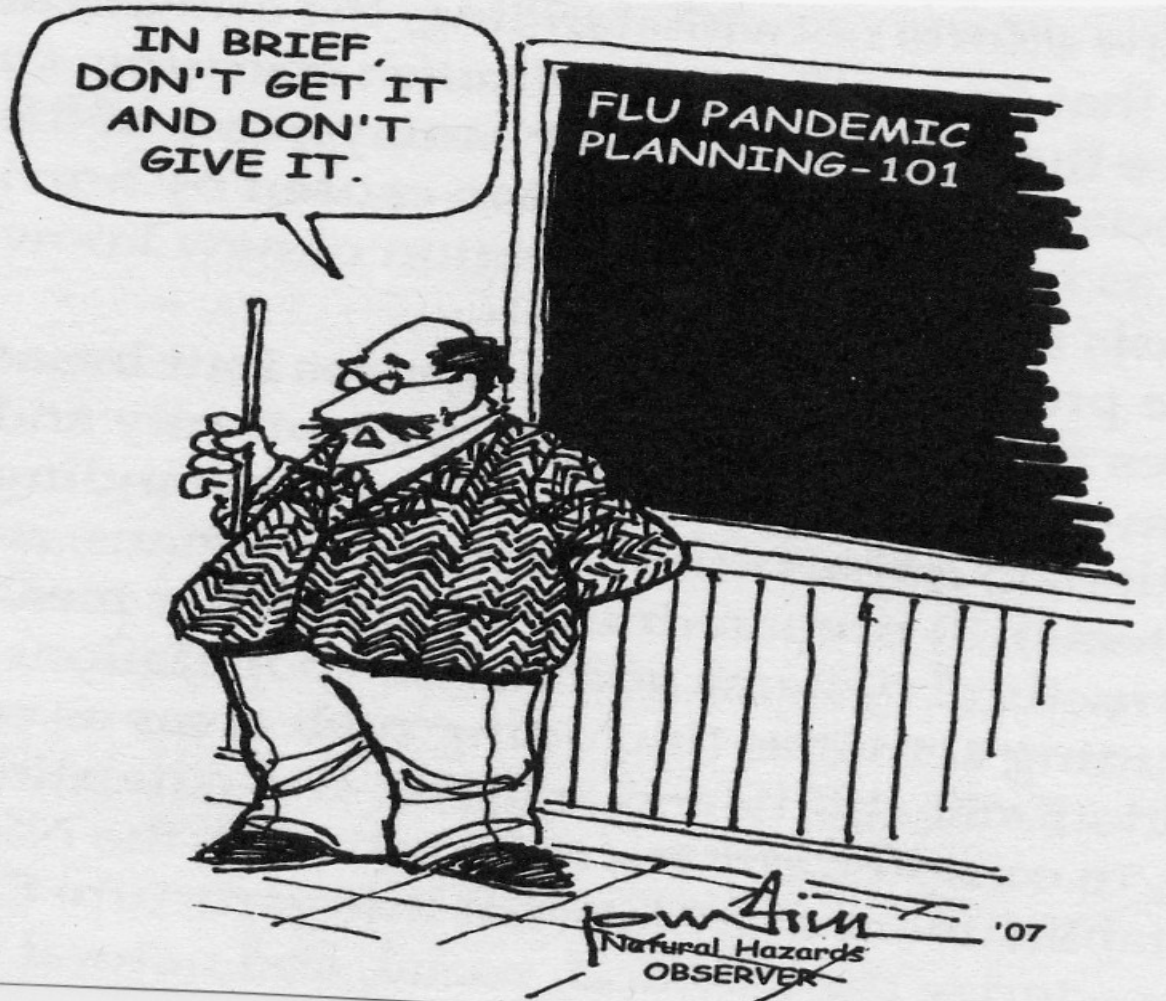


1918 Death Rates: Philadelphia v St.



Weekly mortality data provided by Marc Lipsitch (personal communication)

Disease Control Strategies



**Consistent
Public**

Messaging

Changing Behaviors



PandemicFlu.gov



AvianFlu.gov

Get Informed. Be Prepared.

The official U.S. government Web site for information on pandemic flu and avian influenza. Information is organized by topic on the left sidebar.

[Pandemic Flu Home](#)

[General Information](#)

[Planning & Response](#)

[Monitoring Outbreaks](#)

[Health & Safety](#)

[Tests, Vaccines & Medications](#)

[Bird & Animal Issues](#)

[Global Activities](#)

[Travel](#)

[Research Activities](#)

What Can Be Done Now

[Federal Government](#)

[State & Local Governments](#)

[Individuals & Families](#)

[Business](#)

[Schools](#)

[Health Care Providers](#)

[Community Organizations](#)

Challenges and Preparation -- Individuals and Families

As you plan, it is important to think about the challenges that you might face, particularly if a pandemic is severe. It may take time to find the answers to these challenges. Below are some situations that could be caused by a severe pandemic and possible ways to address them. A checklist and fill-in sheets for family health information and emergency contact information have been prepared to help guide your planning and preparation.

Please note that documents in PDF format require [Adobe's Acrobat Reader](#)

- [Checklist, Guide, and Information Sheets](#)

- [Personal Planning Checklist](#)

Pandemic Influenza Planning: A Guide for Individuals and Families, available for download in [PDF format](#).

Andy's Four Big Concerns about Pandemic Response in the U.S.

1. What will be the extent of social disruption?
2. What will be the capacity of families and communities to come together to support one another?
3. How will we support the “special populations” living amongst us?
4. Will our infrastructure withstand the change in the way we do business in a pandemic?

Social Disruption

- Plan for the disruption of usual services; banking, healthcare, education, restaurants, and government.
- Public gathering events will be disrupted including school, church, and volunteer gatherings.
- Personal income may be impacted.

Community and Family Capacity

Since 1918:

- Family structure in the US has become much more geographically dispersed.
- Extended family relationships have become less connected.
- Community identity is less intimate and supportive.
- Sense of family and societal responsibility for mutual support has changed.
- Growing number of disenfranchised members in our society.

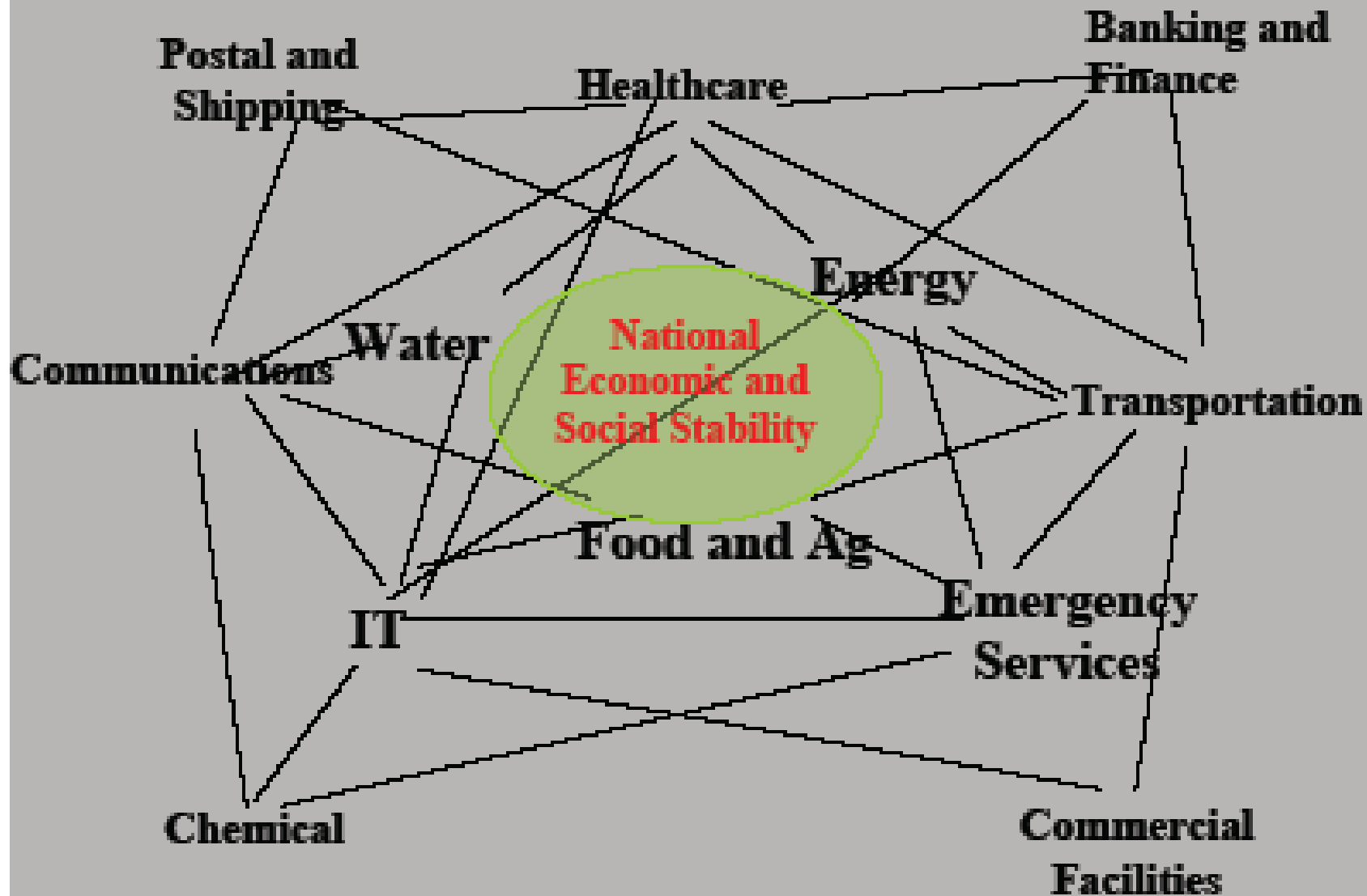
Growing Number of “Special Populations”

- Elderly
- Medically fragile.
 - Technologically dependent
 - Immunocompromised
- Congregate care living populations.
 - Nursing homes
 - Senior Group Homes
 - Assisted Living Facilities



Will our infrastructure survive?

- Public Utilities
- Transportation Sector
- Healthcare Sector
- Finance Sector
- Food and Agriculture Sector
- IT and Communications Sectors
 - Phone
 - Internet



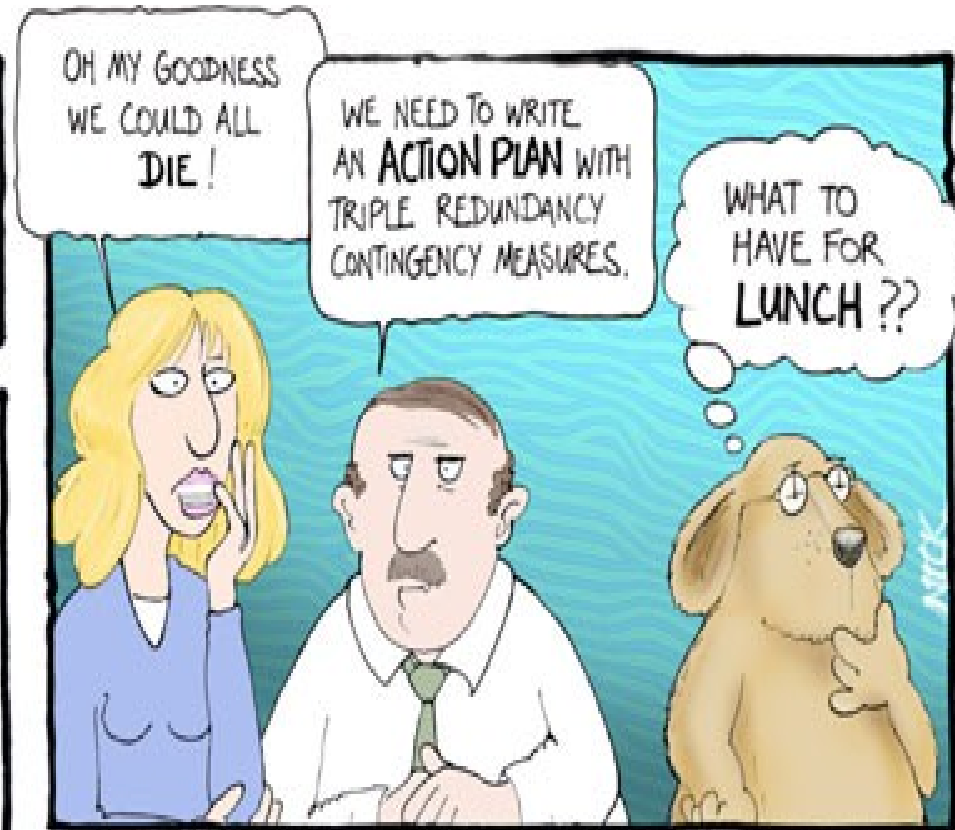
What Is Your Country

P

Plandemic, n.

An uncontrolled outbreak of planning triggered by identification of plausible new ways to die.

Main symptoms: desire to hold press-conferences, followed by either mass inoculation or compulsive stockpiling.



The best way to avoid being embroiled in a plandemic is to stand aside and graciously permit more worried people to do the work.

Will The Telephone and Internet Survive?

Modeling has shown that:

- If 30% of the population adopted Voluntary Protective Home Isolation for 8 to 10 weeks this measure will reduce by one-half the number of people infected
- If 40% stay at home, infections decrease by two-thirds
- The earlier individuals start staying at home, fewer people will become infected overall
- **Technology becomes an enabling factor in such instances**

Social/family interaction and support relies on...

- **Adequate in-home communications**
- **Trusted information sources**
- **Entertainment and education for household**
- **Connectivity to others**
- **Such activities are dependent on the availability of telecom systems and Internet access**

NIAC Figures

<u>Sector</u>	<u>Total</u>	<u>Tier 1</u>	<u>Percentage</u>
Banking & Finance	6,000,000	349,500	5.8%
Chemical	1,825,300	161,309	8.8%
Commercial*	19,872,800	42,000	0.2%
Communications	1,818,622	396,097	21.8%
Electricity	1,600,000	50,000	3.1%
Emergency Services	2,257,419	1,997,583	88.5%
Food and Ag	22,072,000	500,000	2.3%
Healthcare	13,062,000	6,999,725	53.6%
Information Technology	8,494,000	692,800	8.2%
Nuclear	175,000	86,000	49.1%
Oil and Gas	1,444,740	223,934	15.5%
Postal & Shipping	1,720,000	115,344	6.7%
Transportation	3,012,000	100,185	3.3%
Water and Waste	<u>1,480,000</u>	<u>608,000</u>	<u>41.1%</u>
	84,833,881	12,322,477	14.5%

*Commercial sector total numbers do not include the 4 sub-sectors considered less critical in a pandemic.

Essential Workers

Tier 1

- Emergency Services Sector
 - 1,977,583 (89%)
- Health Care Sector
 - 6,999,725 (53%)
- Information Technology Sector
 - 692,800 (8%)
- Communication Sector
 - 396,097 (22%)

Are there protocols today for promoting U.S. service provider (cable and telephone companies, “last-mile” providers, etc.) collaboration and coordination to preserve Internet access and limit overload?

- Who owns the internet?**
- Can it be controlled?**
- Rolling time periods for accessing the Internet**

Who should establish user priorities and preferences?

- Should business have preference?
- What is “routine, low priority” traffic?
- Dedicated ISP for First Responders & critical infrastructure

If an Internet slowdown is experienced during an outbreak of Pandemic Flu rather than a complete halt....how will different computer programs and/or protocols be affected? (eg: E-mail versus Web-browsing versus VoIP?)

Are there alternatives to Telephone and Internet?



Pandemics Happen



Got any

pink flamingos?